Exhibit 4

	Case 1:19-cv-12551-FDS	
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1	UNITED STATES DISTRICT COURT DISTRICT OF MASSACHUSETTS	
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4	SINGULAR COMPUTING LLC,)	
5	Plaintiff) Civil Action)	
6) No. 19-12551-FDS vs.	
7	GOOGLE LLC,	
8	Defendant)	
9		
10	BEFORE: CHIEF JUDGE F. DENNIS SAYLOR, IV	
11		
12	STATUS CONFERENCE	
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14		
15	John Joseph Moakley United States Courthouse 1 Courthouse Way	
16	Boston, MA 02210	
17		
18	July 18, 2023 3:30 p.m.	
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23	Valerie A. O'Hara, FCRR, RPR Official Court Reporter	
24	John Joseph Moakley United States Courthouse 1 Courthouse Way	
25	Boston, MA 02210 E-mail: vaohara@gmail.com	

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1	<u>PROCEEDINGS</u>
2	THE CLERK: All rise. Court is now in session in the
3	matter of Singular Computing LLC vs. Google LLC, Civil Action
4	Number 19-12551.
5	Participants are reminded that photographing,
6	recording or rebroadcasting of this hearing is prohibited and
7	may result in sanctions.
8	Would counsel please identify themselves for the
9	record, starting with the plaintiff.
03:31рм 10	MR. TIMBERS: Kerry Timbers from Sunstein representing
11	Singular, the plaintiff.
12	THE COURT: Good afternoon.
13	MR. SEEVE: Brian Seeve from Prince, Lobel
14	representing Singular for the plaintiff.
15	THE COURT: Good afternoon.
16	MR. DOHERTY: Good afternoon, your Honor, Adam Doherty
17	also from Prince, Lobel for Singular.
18	THE COURT: Good afternoon.
19	MR. VAN NEST: All right. Good afternoon, your Honor,
03:32РМ 20	on Zoom, Bob Van Nest from Keker, Van Nest & Peters for Google.
21	I'm here with Deeva Shah from our firm; Asim Bhansali from the
22	Kwun, Bhansali firm; Matthias Kamber from Paul Hastings.
23	Good afternoon.
24	THE COURT: All right. Good afternoon. All right.
25	This is a status conference. Plaintiff's counsel are

physically present in the courtroom, defense counsel is appearing by video. In case anyone is either concerned or feel that they're at a disadvantage, they have an advantage because they're here or not here, let me state it makes literally no difference to me except I suppose if Mr. Van Nest had gotten on an airplane, I'd be upset about his contribution to climate change.

MR. VAN NEST: Thank you, your Honor.

THE COURT: I'm perfectly content to have this hybrid or for that matter all video. As I think you know, I've denied the motion to continue the trial. I recognize that there is no perfect way to handle this, that ideally every contingency would be settled and everything would be in a perfect orderly and sensible progression of events, and the reality is it doesn't always work like that, and under the circumstances, I thought the best course was to not continue the trial.

What I propose to do today is to -- I'm going to render my rulings on the four pending summary judgment motions. I'm not yet ready to reach the three motions to exclude testimony, which largely but not quite entirely deal with the question of damages and reasonable royalties.

I think there's a part of the motion concerning

Dr. Khatri that's not covered by that, but I'm only going to
handle the summary judgment motions at this stage.

I want to take up the question of the emergency motion

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and talk about trial logistics or anything else that anyone wants to raise.

So what I'm going to do is to dive into the summary judgment rulings. In light of the time involved here, I'm not going to I don't think put any of this in writing. I may -- well, with one possible exception. Mr. Van Nest, you may not be able to see, but my law clerks are grinning from ear to ear that I'm not making anyone put this in writing, but I think it's more important that I render the decision, and so that's what I'm going to do now.

All right. Let me first take up what I think is the easier of the motions, and that's Singular's motion concerning CNAPS and GRAPE-3. The part of it concerning GRAPE-3 has been withdrawn, so it's only a motion concerning CNAPS, which I think is Docket Number 464.

My understanding is that Google has an expert,

John Gustafson, who intends to testify to the effect that the

claims are obvious and that his basis for doing that, at least
in part, is some combination of CNAPS plus the Tong patent or

CNAPS plus the Shirazi publication or both. I think it's an

obviousness, not an anticipation argument, but it doesn't

matter for these purposes.

Tong is a patent; Shirazi is a publication. Both were known to Google at the time of the IPR proceeding. In fact, I think Google referred to both, and the essential issue here is

the application of IPR estoppel.

For reasons that are not completely clear to me, the IPR process permits parties to rely on patents and publications but not systems or physical models or products. To the extent that estoppel applies solely to patents or publications, that's easy. The answer is it does.

To the extent it applies to systems or models or physical objects, it does not. The complication is what about a combination of the two? That is, a system plus a patent or a system plus a publication?

My view is that because Google could not make that argument to the PTAB, that is, it would not have been permitted to make the argument that a system plus a patent or a system plus a publication required a finding of obviousness, it would be unfair to estop them from making the argument now, they never had a chance to make that argument during the PTAB proceeding.

So I'm not going to prohibit them from doing that, but there is a caveat, I guess, that comes with that. This process could easily lead to abuse. Conceptually, at least in my head, when I think of a combination of things that render something obvious, I think of it as more or less 50-50, you've invented the pencil, you've invented the eraser, you put the eraser on the pencil, and there you go.

The problem is that the system could be something of a

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trojan horse to introduce information concerning the patent, which would otherwise be prohibited. So if -- obviously, this is strictly a metaphor, but if Gustafson's opinion is 99.99 percent patent and .01 percent system, it seems to me that he is using this as an end-run around the estoppel doctrine.

I can't decide that question in the abstract, I'm simply making the observation that it has to be what I'll call a true combination opinion, that the claims were rendered obvious by the combination of the system and patent, system and publication, or all three, and so I'm going to deny the motion, which is, I think, framed as a motion for partial summary judgment, but, regardless, I'll deny it as to CNAPS. It's moot, I believe, as to the GRAPE-3 system, and I will leave it there for now.

Again, which is just a warning that I don't think that this ought to be a vehicle to completely evade the estoppel requirements. So that's 464, which again is denied.

467 I think is Google's motion for summary judgment on the grounds that the claims are patented and ineligible under Alice. To state the basic legal principles, patent eligibility under Alice is a question of law. There are no disputed facts at least as to the Step 1 analysis of Alice. Patents are presumed valid, and the party challenging validity has the burden of proving ineligibility by clear and convincing evidence.

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The framework established by the Supreme Court in Alice does involve a two-step inquiry. The first question is whether the claims are directed to an abstract idea. The standard for determining that according to the court and the Federal Circuit is you look to the claimed advance over the prior art. And the second step is whether the claims -- if so, whether the claims contain an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application.

Google contends first that Step 1 is directed to an abstract mathematical idea, and Singular contends that the claimed advance is essentially a form of computer architecture.

Having considered this at some length, I have concluded that I agree with Singular, at least to the extent that the claims are not directed to an abstract idea.

According to Singular, and I believe this is correct, the patent is directed to again computer architecture to a number of LPHDR execution units with certain properties or parameters. The claimed advance is greater computational power or perhaps greater computational power with the same, with a given amount of computing resources.

It does, as near as I can make out, involve a creation of different hardware that permits an ability to do precise and imprecise operations together or simultaneously or perhaps in parallel, but the point is it's not simply the arithmetic, and

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the claims do not simply recite the desired result, but it's a specific solution for accomplishing that goal, and that decision is informed by the Federal Circuit decisions cited by Singular: Koninklijke, Uniloc, Adasa, and Core Wireless.

So my view is that at Step 1 of Alice, the claims are not directed to an abstract mathematical idea but go to a -- or they are directed to a form of computer architecture that makes use of certain mathematical operations. They are, therefore, patent eligible.

I do not need to reach Step 2, but it seems to me that if I did, the claims contained in the necessary inventive concept, or at a bare minimum, disputed issues of material fact would preclude summary judgment, and, therefore, Google has not met the burden, its burden of proving ineligibility by clear and convincing evidence, and, again, it's not preponderance of the evidence, it's clear and convincing evidence, and the patents are presumed to be valid, so I'm going to deny Google's motion, which is 467.

474 is in effect Singular's cross motion for summary judgment based on Alice. It's essentially the same issue as Google's motion, that is, whether the claims are directed to an abstract idea. At the beginning of the case, Google had filed a motion to dismiss under Section 101 indicating that the claims could not survive scrutiny under Alice. I denied that motion, observing, among other things, that I had not issued my

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claim construction order, which I have since done, and I see nothing with the claims, again, as I have construed them, that requires a determination that the patents are ineligible because they are directed to an abstract idea.

This is again a question of law. There's no disputed facts as to Step 1. It seems a little odd to me the way this is framed, Singular's moving for summary judgment in part on the assumption that patent ineligibility is a defense, which I think it is. I will grant Singular's motion for summary judgment on that defense. I do accept the argument that the claims are not directed to patent ineligible matters at Step 1 of the Alice analysis, and, therefore, Google cannot prevail on its defense of patent ineligibility under Section 101.

Singular hasn't quite framed it that way, but I think that's right, that it's something as to which Google bears the burden of proof, and, therefore, it's a defense.

Let me turn to Google's motion for summary judgment of non-infringement. This is for me a much more challenging motion. Essentially Google contends that the accused TPU boards do not meet the structural limitations of the claims, in substance, and I'm very much simplifying and paraphrasing.

Google says that Dr. Khatri agrees that there are only 2,000 plus rounding circuits in TPU Version 2 and 4,000 plus rounding circuits in TPU Version 3, and, therefore, the requirements of the patent or the claims, I should say, that the TPU boards

contain at least 8300 LPHDR execution units cannot be met, and Google contends that Dr. Khatri's opinion is in effect a work-around in various impermissible ways.

I've read the briefs multiple times. At some point, I'm going to be able to recite them like the Gettysburg address because I'm so familiar with them and listened carefully to the arguments and thought about it as best I can, and at this stage, at least, I am convinced that there are genuine disputes of material fact as to the basic question of infringement, that is, whether the accused devices meet the limitations of the claims sufficient to require denial of the motion for summary judgment.

I'm sure I've not heard the last of this argument, but
I'm only going to address the issue in front of me, which is
whether Google is entitled to summary judgment as a matter of
law on its non-infringement contentions, and in that respect,
the motion -- that motion is denied, I should say.

So I think that addresses the four pending summary judgment motions. I'll entertain questions for clarification, and, again, I think I have three pending motions to exclude testimony. The one involving Dr. Khatri has damages and non-damages pieces to it, but at this stage, I'm going to render those opinions, I think, together, but I'm not quite ready yet to do that.

So let me pause there. Mr. Timbers, any questions or

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issues in terms of my ruling?

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MR. TIMBERS: No, your Honor.

THE COURT: Mr. Van Nest.

MR. VAN NEST: Just one, your Honor, and that is will you be issuing anything further on the non-infringement to describe what the disputed issues of fact for the jury are to resolve? I'm speaking now about our non-infringement motion. I appreciate that you've denied it based on genuine issues of fact. Will your Honor be clarifying what those are before we begin the trial?

THE COURT: I'm not going to. For me to do that and to be at least 51 percent confident that I get it right will take longer than the entire trial, so I'm going to leave things where they are.

I should add, it is -- I'm not sure that I have ever or that I can grant summary judgment without putting something in writing. I want to at least think about that, so it's at least possible. I mean, the Alice motions are really the flip side of each other. I'm not sure I need to do anything else in that regard, but it's at least possible. I'm going to have my clerk look at that. There may be something in writing there, but I'm not going to go into any more detail about how the experts differ as to whether the claim limitations have been met. I'm going to leave it where it is and see how the trial plays out.

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MR. VAN NEST: Thank you. That was the only question I had.

THE COURT: Then on the motions to exclude at the end of the proceeding, I'm going to set this for another status conference, and I understand, of course, you want to know the answer to those questions, and I'll get that out as soon as I can.

All right. I want to next take up the emergency motion. It was just filed. Because it's styled as an emergency motion, I read through it quickly. Google has not had a chance to respond, but let me try to set a framework for thinking about this.

In my view, something like this has three potential components. One is remedial, should I reopen discovery in some particulars to permit as a remedy or remedial actions for what is alleged to be a failure to make discovery? That's Number 1.

Number 2 is compensatory, do I need to order attorney's fees or anything of that sort?

And Number 3 is punitive, do I need to sanction a party for failure to make discovery?

I want to put 2 and 3 off the table for now. We have plenty of time to talk about that. What I want to talk about is what do we do in the short term, which is do I permit discovery to be reopened, and, if so, on what timetable? And normally I would let this play out in the ordinary course.

On Saturday, I'm leaving the country, and I feel like I ought to have an answer to this question before I get on a plane because otherwise we'll lose some time, and I think if we're going to reopen discovery in any respect that the time to do that is now.

So, Mr. Van Nest, or anyone on your team, let me hear your response.

MR. VAN NEST: Your Honor, thank you for giving us a chance to respond to this. I think that we've made substantial progress between the parties, which is not reflected in the papers that you saw. We did have a comprehensive meet and confer yesterday, and let me give you in just a minute the result of that.

THE COURT: Okay.

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MR. VAN NEST: But first I just want to set a couple of things straight. One, this e-mail is not some kind of game changing blockbuster at all. It is, in fact, very similar to an e-mail that was produced in discovery that was sent by Dr. Dean to Dr. Bates back in the relevant time period and made the same remarks, very similar remarks to what's in this one.

He was examined on that at his deposition by Singular, so they have that very similar e-mail from a very similar time, and they've examined on that.

2, this is not at all inconsistent with Dr. Dean's testimony, which has always been that he first became aware of

Dr. Bates' work in the fall of 2013, and this e-mail is from 1 that same period, and it's from the period in which the other 2 companion e-mail was sent, so it doesn't change anything about 3 4 the case narrative. 5 And the third point I want to make is that no metadata 6 has been altered or lost. We've provided, because we wanted to get it in plaintiff's hands, a version that came from some 7 file, but they now have the full metadata version. 8 9 And if I may, your Honor, we've already agreed to most 03:54PM 10 of the remedies that they've requested in their motion. If you 11 look at page 10 --12 THE COURT: Okay. 13 MR. VAN NEST: -- they outline what they want. Do you 14 have the motion there? 15 THE COURT: Yes, I do, and I'm at page 10. Go ahead. 16 MR. VAN NEST: Taking category 1, which is follow-on 17 documents, we agreed yesterday in the meet and confer and produced last night everything there that exists. So, for 18 19 example, A, Dr. Dean's September 11 e-mail with original 03:55PM 20 metadata, we produced that. 21 I'll skip B for a minute. 22 C, we produced, any and all replies. 23 D, we produced any and all forwards. E, we produced the attachment to Mr. Teller's 2011 24

That was already produced, had been produced in

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e-mail.

discovery, but we reproduced it at their request.

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The only item that we haven't already complied with their request on is B. There is no way today to identify every member of these teams by e-mail. You can see in the e-mail that we did produce, there are lots of people who have received direct e-mails.

And, in fact, one of these lists, the SQB list bounced back to Dr. Dean because he wasn't authorized to send to it, so it didn't actually go out to that list, but with respect to 1, we've provided all the information that's available to us and told them in the meet and confer yesterday we would, and we did that.

I'm going to skip over Number 2 for a minute, but Number 3 is I think the most significant. They've asked us to reproduce Dr. Dean for a continued deposition, and we agreed to do that, but we ask for some sort of reasonable limitation on time and subject.

Obviously, this e-mail and anything that reasonably follows from it is fair game, but that's not another seven-hour deposition. We asked them if they would agree to some time limit. Dr. Dean is a very senior engineer at Google, so we don't have any objection to reopening discovery. We've already, for this purpose, we've already produced the items in 1, and we're prepared with some guidance from your Honor to make Dr. Dean available for further deposition consistent with

this e-mail.

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And with respect to Item 2, that's not something that they requested in their e-mail to us. They didn't raise it until we got to the meet and confer. I really don't think it's appropriate, and if we're going to consider it, we'd like a chance to brief that, but fundamentally this e-mail wasn't produced because it didn't hit on the search terms that the parties had agreed to in the ESI order, and I don't think there's any dispute about that.

When I saw it recently in connection with trial prep,
I felt in fairness it should be produced, and I asked the team
to produce it.

What I suggest we do per your Honor's discussion of timing is we're prepared to find an appropriate time to put Dr. Dean up for a limited deposition, and if that doesn't satisfy plaintiffs, they can certainly come back and ask for something else, but to get into a full blown 30(b)(6), when there's really no evidence that we didn't comply with our discovery obligations, this e-mail simply didn't hit the search terms.

THE COURT: Bates was not a search term?

MR. VAN NEST: The search terms -- Joe Bates was, the search terms included Google technology in connection with Bates and other terms as part of the search string, and this e-mail, for whatever reason, didn't hit on those because it's

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not referencing anything else that was called for by the search terms, as I understand it.

Now, this other e-mail I'm referring to did hit the search terms. It was then included in our review, and it was produced, but it makes the same statement that this one does, namely that Dr. Dean is expressing to Dr. Bates that he, himself, Dr. Dean was thinking about the same ideas already that Dr. Bates was presenting, so that's the most relevant portion of the e-mail, and that is repeated in almost, not quite verbatim but very similar terms in the e-mail that was produced and on which Dr. Dean was examined about, but having that said, your Honor, I'm the one that decided that this should be produced now, and we did, and we are willing to give them another opportunity to examine Dr. Dean about it, so I don't think we're not resisting reopening discovery for this purpose.

THE COURT: All right. Who wants to respond?

MR. TIMBERS: Your Honor, thank you. Two things about the e-mail. One, it's not the same as the one that was sent to Dr. Bates because this e-mail has an analysis of the presentation that the later e-mail does not.

THE COURT: Let me -- maybe I can just cut to the chase. Whether it's a blockbuster or not, I think it's relevant and sufficiently important that this is worth talking about.

1 MR. TIMBERS: Fair enough.

THE COURT: Okay.

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MR. TIMBERS: The second is it was sent among others to two people who are very involved in designing the accused chips, both of whom, one of whom had said at his deposition he was not familiar with Joe Bates at all. That's Phelps and Loudan, who was also very involved in this, and who said that he later learned about Joe Bates, not at this time.

I mean, it was also sent to literally everyone at Google Brain, and that's a problem. We didn't learn until last night after we filed the motion that these two people received this. This is pretty early in the development of the accused chips, and these people said don't know what you're talking about back then, we didn't have this document to show them, so this is part of the problem that we don't know how deep this hole is.

The second thing is that we were told in the meet and confer that Google gave Keker, Van Nest this document before discovery began. I don't know what else they gave Keker, Van Nest that Keker, Van Nest didn't produce, okay? This is not an issue of what shows up in search terms, this is an issue of documents that Google thought was relevant to give to their attorneys for production and not produced.

And we don't know what else was produced, and in the follow-up to this, this is a document that this e-mail was sent

to. I mean, if you saw the list, it's incredibly long. Have they checked these other e-mail boxes to see what else there is? It's very unclear, and so that's why we think we need a 30(b)(6) to ask these questions, to find out what else is there. That might lead to an additional request or a request, for example, to what documents did Google give its attorneys.

I don't want privileged information, I don't want to ask any questions about who said what to whom, that's privileged, but what was done is what was done. It's a little early to ask for that straight out because we haven't had a chance to talk to the people involved.

And last, but not least, I'm pretty concerned about how we get all this done. This is very, very last minute. We have very little time to prepare for trial, and this gives me some concern about having to do this potentially a pretty decent size detour and still be able to have a fair trial on the current schedule, and I say that with great trepidation because we want the trial to go ahead, but to have a fair trial, we need a chance to do this and find out what's going on.

What's going on is inconsistent with what the witnesses have said. It's tied directly to Bates and tied directly to the accused chips. There's no closer time than this e-mail.

THE COURT: All right. Here's what I'd like to do,

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which is take this a step at a time, okay? As we say, we don't know how deep this hole is, and the place to start is with initial steps.

This is, again, not so unimportant that it's not worth bothering about. I think it is significant enough that this is worth the trouble. First, I'm going to authorize a deposition of Dr. Dean. I think it is probably correct that that is not going to take seven hours or anything close to it.

It ought to be about the e-mail, about if he was involved, and maybe he had no involvement, the steps that led to the production of the e-mail in connection with this litigation, and, of course, a penumbra around the e-mail, if he remembers anything, subsequent discussions, follow-up e-mails, what have you.

I think all of that is fair game. And where we go from there, I don't know. It may be that we need one or two other depositions or three or four, I don't know. Are you willing, at least -- well, let me ask Mr. Timbers, would you expect to take these by video as opposed to getting on an airplane?

MR. TIMBERS: Yes, by video.

THE COURT: All right. And I think the thing to do is to get that process underway. As far as the 30(b)(6) deposition, you may be entitled to it. What I think I'd like to do at this stage is to have you continue to meet and confer

and to settle whatever it is you think you can settle in terms of at least so you understand Google's position, here's how the documents were searched for, here's how they were collected, here's what happened, obviously, without revealing privileged information unless I'm convinced that somehow privilege has been waived, or work product, for that matter, but making the best headway you can make on that topic voluntarily and then see where we are and whether any follow-up is necessary for purposes of fairness.

And I don't know the answer to any of that. This is almost exactly 20 years ago -- 10 years ago, I'm sorry, the e-mail, you know, it may be that you get a whole lot of I don't remembers, and I don't know where this path leads. I'll let you start down the path.

I'm not going to put an artificial time limit on the deposition, but the basic topics are not a replay, obviously, of everything Dr. Bates ever did, but this e-mail, things that are reasonably related to this e-mail, which include the circumstances under which the e-mail was collected and produced and conversations, exchanges of information, or whatever that, again, in some way connected this e-mail that in fairness you didn't have a chance to ask about before.

I'm not going to say it's literally the e-mail itself because that's too narrow, but this is not a chance for a whole other bite at the apple, it's in some way relating to or

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arising from the e-mail.

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Let's get that done in some reasonably prompt time frame. I want to put the rest of it on hold. If Google can't explain to your satisfaction why the Google Brain, it was so-called the list serves, whatever that is, you know, we can talk about whether or not you need some further discovery there, and I want to put the 30(b)(6) deposition on hold for the time being until I understand what in fairness you ought to be permitted to do.

And am I correct you have the e-mail with the original metadata now? And that there's nothing -- no, you're not, it's been promised to you but you don't have it yet?

MR. TIMBERS: I'm not 100 percent sure about the metadata. Mr. Van Nest just said that we have it. It came in last night.

THE COURT: Okay. The reason I'm asking is that if there's some odd ball thing about that, you know, that opens up another door, and we can talk about that, but I'm going to assume for present purposes that it shows that it was created on September 11th, 2013 and sent, you know, to various people and so on.

And these attachments to Astro Teller e-mails, I don't know if you've already seen that. Again, I'm going to apply a rule of reasonableness here. I do think you're entitled to explore it, and I want to take it a step at a time.

1 We'll see how it goes. I think I'd like to keep this if future disputes arise, but I may not necessarily be 2 reachable, I'm going to be out of the country, and it's 3 4 possible if there's some kind of emergency and it needs resolution, I'll just have it referred to the magistrate judge, 6 and we'll deal with it that way. I'll alert the MJ to this dispute. All right. Let's see how it goes. Mr. Van Nest, 7 anything further on this topic? 8 9 MR. VAN NEST: No, your Honor, thank you. 04:11PM 10 THE COURT: All right. Let's get this thing set up, 11 and I'm sure Dr. Dean is busy, but let's make him available, okay? This should have been produced, it was not. 12 13 All right. Before I forget, let me set a future 14 status conference. I would say somewhere in the August 15th, 15 17th time frame. We may need to confer before that, but let me 16 put something in the calendar. 17 THE CLERK: How about Thursday, August 17th at 2:00? 18 THE COURT: Thursday, August 17th at 2:00 eastern 19 time. 04:11PM 20 MR. VAN NEST: Your Honor, as I mentioned on our last 21 call, I also am going to be out of the country. I'm back that following Monday, the 21st. If you weren't able to get to it 22 23 before the 17th, I'd ask that we -- I'd like to be present. 24 THE COURT: Okay. I can live with that. 25 MR. VAN NEST: Will it be Zoom?

THE COURT: It will be Zoom or hybrid or live,
whatever your preference is. There will be a Zoom option.

will tell you for what it's worth before you panic, my
inclination is not to exclude testimony. That may be
illogical, I have to see who is maybe speaking in cross
purposes, but you should assume, at least until you hear
otherwise, that everyone is going to testify on every topic,
but I have by no means come to rest on that decision, but we
can do the 21st. Am I around?

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THE CLERK: Yes.

11 THE COURT: What time?

THE CLERK: Monday the 21st at 2:00.

THE COURT: Monday the 21st at 2:00 eastern time. All right. Let's talk about trial logistics. I think we touched on some of this before, but I think we also ought to talk about it now just to make sure I'm not dropping this on you at the last minute and that you're thinking about all of this.

I guess I'll start with impanelment. Let me take it from the top. My normal practice in civil cases is to impanel 10 jurors, all of whom deliberate and vote. You can go down as low as 6 or as high as 12 in the federal system. I've been impaneling 10. I think larger jurors are better than smaller, and it is easier to impanel 10 than 12. I'm not that sure that there's a meaningful difference between 10 and 12.

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I don't know how many people it will take to impanel 10, that is, how large our venire needs to be. It is increasingly difficult to impanel jurors for a host of reasons, including the general falling away of people's sense of civic obligation and civic duty and people's general unwillingness to serve, but we'll hopefully call in enough people, even if we have a whole lot left over to make sure that we make it to 10.

My expectation is that I will not use a questionnaire but that we will call the people into the courtroom. They will sit in the back. I will ask questions of them, and then the people who give affirmative answers will be interviewed at sidebar, and I will try to ask a question or engage at least each juror who is potentially seated to make sure that I'm accounting for people who have language or hearing issues, but I will either exclude people or not for cause.

I'm guessing we'll probably have a lot of people who say that they have hardships and can't serve. I would expect a lot of trepidation, as there always is in patent cases, but particularly in a highly technical patent case. I'll deal with that as best I can.

You'll have a randomized list in front of you with very limited amounts of information, name, address, town, occupation, spouse's occupation. As I eliminate people one-by-one, the first 10 people who remain on that list will be called into the jury box when the screening for cause has been

completed.

So if I eliminate jurors 1 through 5 for cause, we'll call 6 through 15 into the jury box. I'll do some follow-up with them, in particular, filling in blanks. If they're retired, I'll ask what their occupation was. If they left questions blank, like are they married or their spouse's occupation, I'll fill that in. I'll ask a question of everyone with whom I haven't engaged to assure myself that they have English language capability and they're not hard of hearing.

We will then exercise peremptories in rounds one-by-one. Each side is entitled to three peremptories by statute, so that in the first round, plaintiff will go first and exercise one peremptory, if they choose to. I'll then look to the defendant, they can exercise one if they choose to, and I'll look back to the plaintiff and so on. So one-by-one in rounds.

In the first round, the plaintiff will go first. So going back to my hypothetical, we have seated jurors 6 through 15, I haven't removed any of them, and plaintiff exercises their first peremptory on Juror Number 6, defendant then exercises a peremptory on Juror Number 7, I go back to the plaintiffs, and they say they want to strike Number 8. Both sides say they're satisfied with the jurors who remain, we will replace 6, 7, and 8 with 16, 17 and 18.

The defendant will go first in the first round. At

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that point, they have two peremptories left, and the plaintiff has one. Peremptories must be exercised -- there's no backstrikes, that is, you have one chance to strike a juror, to exercise a peremptory on a juror, that is.

So getting back to my hypothetical, in the first round, you can strike anyone 6 through 15; in the second round, you can only strike 16, 17 or 18 and so on.

And we'll go back and forth until you've exercised all your peremptories or you're both satisfied with the jury.

I will then give some preliminary instructions to the jury as well as usual advice about not talking to anyone about the case, not looking things up on the Internet.

We had a very bad experience here last week in a significant criminal trial. During deliberation, one juror told the other jurors that he had looked something up on the Internet, and they had to declare a mistrial, which was unfortunate, but I try to make my instructions as strongly worded as I can about not doing that, but, in any event, I'll give that instruction, and then we'll get into the trial.

For purposes of planning, you should assume that you will open on the day we impanel but you will not need to produce a witness. It is highly unlikely that we will get that far on the first day, and I won't split the openings, either we'll have time for both or only have time for one.

In terms of openings, I am a fan of demonstratives.

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This is certainly a case that cries out for them. It can be something as simple as a name or a word or a more complicated drawing or chart. Obviously, they have to be fair, they have to be based on the expected evidence that will come into the trial, and you have to show it to your opponent beforehand. I don't want you to wait until the morning of the openings to show them to your opponent. I would like it reasonably in advance so that they have a fair chance to respond.

I would expect on Day 2, we'll start with the first witness from the plaintiffs. The normal trial day, as I think I said, would be 9 to 1. I want to meet every morning at 8:30, sometimes at 8:00 to discuss what is on tap for the day and to anticipate evidentiary objections and other issues.

I do expect as a matter of professional courtesy, if nothing else, that you will advise your opponents who the next day's anticipated lineup is as well as the lineup for the day after that, and I do not limit cross-examination to the scope of direct examination, but recross -- I'm sorry, redirect will be limited to the scope of cross and recross to the scope of redirect, the point being that ideally witnesses will testify once, and we'll get them on and off the stand.

As I think I said or may have said, frankly, I can't remember, I will try to be accommodating to out-of-state witnesses or to busy professionals to try to get them on and off the stand in a day, to take them out of turn, start early,

go late, do something of that sort within reason to try to accommodate them to move the case along.

For better or for worse, I'm going to instruct my law clerk to provide each of you or each lead counsel, I should say, both sides, with materials that I've put together for a course in trial advocacy that I taught for many years at B.U. Law School. It's like a book on my views on trying cases. For better, for worse, it probably would be good for you to know my view on, you know, certain issues, particularly as to which there are differences of opinion.

I'm not going to force you to follow my style, obviously, but I think it will probably be useful to you to have this window into the darkness of my soul, so to speak, and how I expect things to proceed, but as I think I told you, one of the things that drives me crazy about lawyers is lawyers who are unprepared, disorganized, making questions up on the spot, and asking unnecessarily wordy and tangled questions, which just bogs everything down.

I think I understand the technology in this case and the issues, but I struggle at times. I'm guessing the jury is going to struggle as well, and I do expect that you will make a very careful effort to polish and streamline your case and make it as readily understandable as you can under the circumstances.

And, again, I am a fan of demonstratives to help

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illustrate points and to underscore issues. A good rule of thumb is lawyers talk too much and show too little.

I don't particularly care how you present the evidence in the courtroom. We have courtroom graphics software. It doesn't always work the way it should, so you better have a backup. We have a document camera. If you want to use an easel, you know, with a blow-up, that's fine, if you want to use three-ring binders, that's fine, anything within reason.

I'm sure I'm showing my age, but I'm a bit of a fan of the three-ring binder approach, even for jurors, because everyone gets to read the documents at their own speed. It does have issues, beginning with the mechanical issue of putting the binders together. Obviously, a juror can't have anything in front of them that isn't either in evidence or certain to come into evidence, but I think jurors like the piece of paper that they can linger on at their own speed, but, again, it's really up to you.

This is also cumbersome, and it may not be workable. It depends in part, of course, on how many documents there are, how thick they are and all of that, and I tend to like three-ring binders for the same reason that I can flip back and forth and follow the evidence that way.

I'm covering a lot of topics here, I'm free-associating a little bit, but let me pause there. Has anything that I've said to you so far mystified you or

otherwise require clarification? 1 MR. TIMBERS: It seems very clear, your Honor. 2 THE COURT: Mr. Van Nest. 3 MR. VAN NEST: Your Honor, just two questions. 4 5 THE COURT: Yes. MR. VAN NEST: One, am I gathering correctly that you 6 don't typically allow attorney voir dire? 7 THE COURT: Correct. That's not quite true. I allow 8 9 follow-up. The quintessential example being let's say in a 04:26PM 10 criminal case, I ask if people have a criminal record or people 11 close to them, and sometimes they come up to my sidebar and 12 they say, well, my son was arrested for marijuana possession, 13 yada-yada-ya, and, you know, my question is: Do you think he 14 was treated fairly by the criminal justice system? Is there 15 anything about that episode that would affect your ability to 16 be fair? 17 But sometimes lawyers want to know, well, you know, how long ago was it, what court was it in, and so on, and I 18 19 permit that. Massachusetts state courts maybe five years now 04:27PM 20 for the first time authorized attorney voir dire. I wouldn't 21 say it's still completely prevalent here. I've never quite 22 understood what problem it was seeking to solve, and in my 23 limited experience, where I have allowed it to a greater 24 degree, my worst fears have been realized, which is that

lawyers ask argumentative questions designed to either put

things in front of the jury that properly ought to wait for the trial or that are designed to persuade a marginal juror that they ought to confess some kind of bias that otherwise with proper questioning might not be framed quite that way, so I would frankly tell you I don't like it, it's time-consuming, not terribly productive.

You know, let's take the question: Is anybody biased against the parties? I assume everyone uses Google products, with the jurors, that's probably 100 percent true. Have people had an unusually good or bad practice with Google products? I can ask those questions as well as you can. You are going to have a chance to ask me or tell me what you think I ought to ask them, but I can't say that I've seen anything, and my experience has been somewhat limited, but I can't say I've seen anything that makes me feel that this is something I ought to dive deeper into.

MR. VAN NEST: Understood, your Honor, that's helpful. Thank you very much. The other question I had, I think the parties were negotiating, I think this is consistent with what you expect, we find it goes very smoothly if two nights before the witness appears, you exchange, you provide the direct exam exhibits that you're going to use so that if there's an objection, it can be made the next night and we meet and confer and we resolve at 8:30 the morning of the testimony.

Is that consistent with what your Honor would like?

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THE COURT: Yes, it is. And I expect, you know, common sense, which one way I'll say that the practice of law has improved over the course of my lifetime is and probably because the rule changes but partly because people are becoming more sensible. We don't have keepers of records hardly anymore. The parties agree whether there's a genuine dispute about an exhibit or not, and, obviously, there are genuine disputes and not just about relevance or, you know, Rule 403 prejudice but authentication and all of that, but you ought to at least flag those issues.

If it's something I can rule on before trial a month before trial, raise it a month before trial, you know, file a motion in limine, get me thinking about it, but, you know, if you think they can't authenticate a critical exhibit, for example, you can see that one coming months, if not years away, and I ought not to be having to rule on it at sidebar and hearing about it for the first time with the jury waiting.

Things happen, I understand, you know, it's not a perfect process, but you ought to anticipate that, and part of that is having both sides be prepared, what's coming up the next day and the day after that, what exhibits, and so on.

Yes. I should add in terms of the exhibits, I hope there will be stipulations as to admissibility or agreement, anyway. Even if that's true, nothing is in evidence until I said it's in evidence. So that means in front of the jury and

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in the presence of me and maybe even more importantly the clerk, someone needs to stand up and say I offer Exhibit 17.

Now, you can do that en masse. In fact, I would expect that the very first thing that plaintiffs will do at the beginning of the trial is to say something like, your Honor, plaintiffs offer Exhibits 1 through 150 except 78 and 137, which are disputed. And you say that's correct, they aren't disputed, and I say they're admitted. In other words, it's on the record what's in, what's out, not yet admitted, I should say.

So I do want to turn a square corner on that so that I have ruled the admission of every document, not one-by-one-by-one. Again, I don't want that either, but I don't want you to assume something is in evidence, I have to say it's in evidence, okay?

MR. VAN NEST: Your Honor, on the subject of exhibits, Ms. Shah has a question for the Court based on last time's discussion. Ms. Shah.

MS. SHAH: Your Honor, in your order last time, I believe that was Docket 544, you mentioned that the exhibit list would be due this Friday and then supplements would be due on August 11th?

THE COURT: Yes.

MS. SHAH: We just wanted to clarify, the parties met and conferred on this and wanted the Court's guidance on

1 whether you meant filing with the Court or just serving on the other party? Given that we would like to duplicate the 2 exhibits, and so serving on the other party initially would be 3 4 better. 5 THE COURT: All right. I think the filing with the 6 Court can wait until the supplemental list. I don't know that I need that now, okay, but you both need to know what the 7 proposed exhibits are, putting aside the supplemental ones, 8 9 okay? MR. TIMBERS: Your Honor --04:33PM 10 11 MR. VAN NEST: We'll exchange those, your Honor, in 12 other words, we'll exchange them, we won't file them until 13 we've got them objected to and supplements on them. 14 THE COURT: Obviously, at some point I need it. When 15 somebody says this wasn't on the exhibit, I need to know what 16 is the exhibit list. 17 Yes, Mr. Timbers. 18 MR. TIMBERS: I had a separate topic. 19 THE COURT: Okay. Go ahead. 04:33PM 20 MR. TIMBERS: It has to do with the structure of the 21 trial. 22 THE COURT: Yes. 23 MR. TIMBERS: So, the plaintiff has the burden of 24 proof on validity. A lot of the ways that judges do it is 25 plaintiff goes on what we have the burden of proof on, then

1 defendant goes, then plaintiff comes back and responds to the only issues are validity, once we've had a chance to hear the 2 testimony regarding validity, so that would be what we propose. 3 THE COURT: As a general proposition, yes. What I 4 5 don't like or want is people being called back and forth on and 6 off the stand without good reason. If it's an employee, that doesn't matter particularly, you know, they're under the 7 control of one party, but if it's a third party, even if we're 8 taking things out of turn, you know, technically speaking, or 9 04:34PM 10 whatever, I'd like to have that person testify once within 11 reason. I particularly don't want somebody coming in -- well, I don't want them coming in from Lowell, never mind coming in 12 13 from Minneapolis to testify twice a week apart. 14 MR. TIMBERS: Yes. I frankly would expect the only 15 witness on rebuttal would be the expert witness. 16 THE COURT: Okay. So, yes, within reason that makes sense. Again, it doesn't always play out as neatly as all of 17 Okay. Anything else to talk about while I have you 18 that. 19 here? Air conditioning seems to be working. That's a good 04:35PM 20 Mr. Timbers. sian. 21 MR. TIMBERS: That's all for now, your Honor. 22 THE COURT: Mr. Van Nest. 23 MR. VAN NEST: That's all we have, your Honor. Thank 24 you.

THE COURT: Okay. I will be, you know, reachable,

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obviously, thanks to modern electronics. I will be in Europe,
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            so I'll be, whatever that is, eight hours from California.
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            Obviously, I would rather be enjoying my vacation rather than
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            talking to you, not that I don't love you all, but if I need
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            to, I will, you know, just pick your spots, okay? If it's
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            something that really needs to be resolved by me, I'll do it,
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            you know, but if it can wait, let it wait, and, if need be,
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            I'll refer discovery disputes to the magistrate judge. Okay.
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            All right. Unless there's anything else further, we'll stand
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            in recess. Okay. Thank you.
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                     MR. TIMBERS: Thank you, your Honor.
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                     THE CLERK: All rise.
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                     (Whereupon, the hearing was adjourned at 10:57 a.m.)
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1	CERTIFICATE
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3	UNITED STATES DISTRICT COURT)
4	DISTRICT OF MASSACHUSETTS) ss.
5	CITY OF BOSTON)
6	I do hereby certify that the foregoing transcript,
7	Pages 1 through 39 inclusive, was recorded by me
8	stenographically at the time and place aforesaid in Civil
9	Action No. 19-12551-FDS, SINGULAR COMPUTING LLC vs. GOOGLE LLC
10	and thereafter by me reduced to typewriting and is a true and
11	accurate record of the proceedings.
12	Dated July 19, 2023.
13	s/s Valerie A. O'Hara
14	VALERIE A. O'HARA OFFICIAL COURT REPORTER
15	OFFICIAL COOK! REPORTER
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